

LA-UR-21-23889

 $\label{lem:proved} \mbox{Approved for public release; distribution is unlimited.}$

Title: Wilderness Survival

Author(s): Mcclard, David L.

Intended for: Dave is an Earth Week 2021 presenter Environmental Regulatory Document

Issued: 2021-04-21





WILDERNESS SURVIVAL

Dave McClard

4/21/21



INTRODUCTION

What is the Civil Air Patrol

https://www.youtube.com/watch?v=hhoolopZvs8

Quick Poll

How many of you have ever been hiking or driving and got lost?

Statistically, each of us will be directly involved in a potentially life threatening/survival situation.

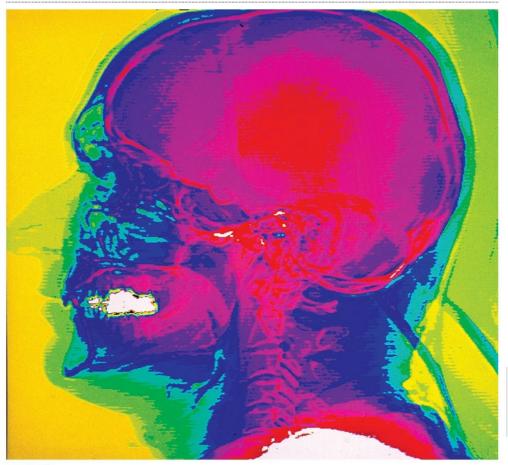
How we choose to react to the situation will potentially have a direct outcome on the safety and wellbeing of our loved ones or those around us at that given moment in time.

SLIBVIVA

Your Brain on Survival: The Physiological Response to a Life-Threatening Situation

Here's what happens when the body shifts into survival mode, and how you can stay in control

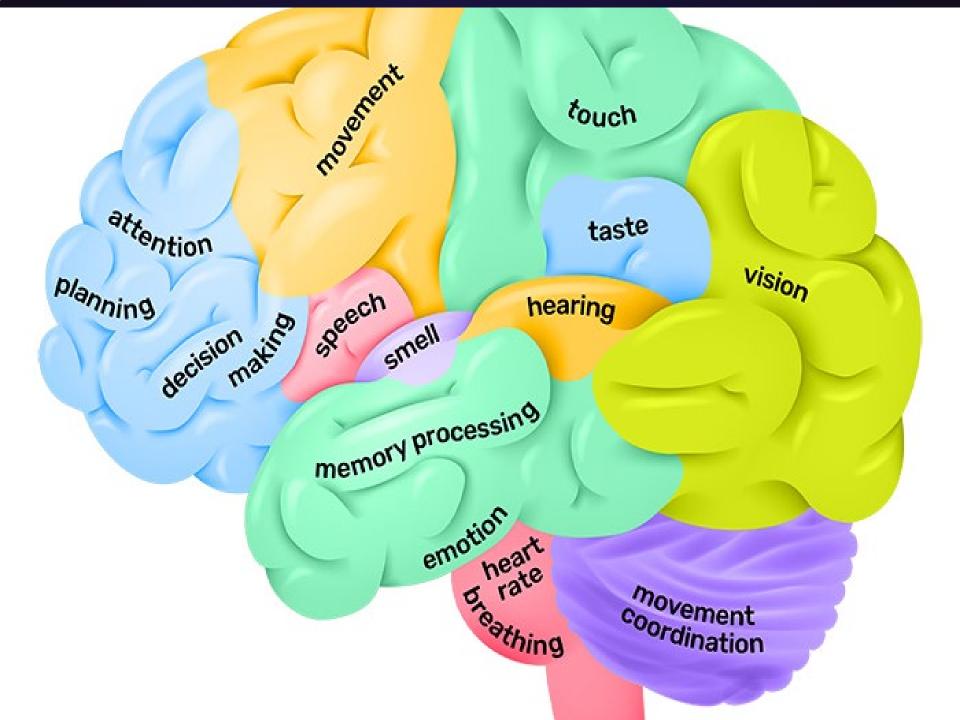
By Brad Fitzpatrick | April 12, 2016



survival

10-80-10

- 10% of people facing an emergency control their fears and act rationally.
- 80% find themselves stunned and relatively unprepared to respond.
- The last 10%, become hysterical, and unable to cope with the situation at hand.
- To ensure you land in the top 10%, you should first understand the physiological processes your brain and body undergo during an emergency.



THE SITUATION UNFOLDS

- The sympathetic nervous system, which stimulates the fight-flight-orfreeze response, takes control of the body.
- Adrenaline and norepinephrine prepare the body for battle.
- Your heart rate increases, and the lungs expand to take in more oxygen (a process known as bronchial dilation). Pupils dilate, narrowing your vision.
- Blood is channeled away from the digestive system and the skin toward the major skeletal muscles for quick action and strength.

- Cortisol is released more slowly than adrenaline and norepinephrine, and it helps sustain the fight-or-flight response over an extended period of time.
- Over time, the engaged sympathetic nervous system depletes the body's energy reserves of glycogen and fat stores. Thoughts become less logical and more visceral. This can lead to impulsive and irrational behavior.
- Over time, when panic subsides, frontal lobe activity increases and rational thought returns.



HOW TO SURVIVE

Utilize your frontal lobe

"A common thread among survivors is the ability to prioritize and maintain focus on the task at hand," Spend a few moments assessing your situation. Resist the temptation to act hastily. Instead, break down the larger task of survival into mini goals that can be performed one by one to help maintain focus and improve internal stabilization.

Gear up

"Know which tools you have in your kit and know how to use them." For example, the simple act of building a fire can build confidence and begin to stack the odds in your favor. If you think logically and use your tools (mentally and physically), you'll dramatically improve your odds of survival.

Comm

Keep your cellphone charged. Invest in a PLB (pay your subscription fees).

PRIORIZATION RULES TO REMEMBER

GENERAL GUIDE - THE RULE OF THREE'S



TOOLS - OVERVIEW

ESSENTIALS

- Every vehicle should have an emergency supply kit. Kits should be checked every six months; expired items should be replaced to keep it up to date.
- Every home should have a survival system, food and water located in an accessible storage area. It's best if you store the items in plastic containers that are easy to grab and carry. Kits should be checked every six months; expired items should be replaced to keep the kit up to date. Include essential meds.
- Hiking & day packs should have at least a basic survival kit in addition to a basic first aid kit. Include essential meds & EPI pens etc.
- 90% of actual survival situations are generally resolved within 72 hours.

WILDERNESS SURVIVAL

Priorities (when you and your party are lost)

- Stay put, wandering around uses valuable time and energy
- Attempt to use your cell to call for help (texting uses less bandwidth)
- If unsuccessful activate your PLB
- Collect water & prepare for use
- Collect wood e.g., Large fuels, medium fuels, tender. Caution follow fire restrictions.
- Build a shelter
- Prepare and consume meals prior to sunset
- If you have a map attempt to locate your position
- Have a signaling device ready to use
- You can do this!

SURVIVAL EQUIPMENT DISCUSSION

Helpful websites:

AMERICAN RED CROSS

https://www.redcross.org/get-help/how-to-prepare-for-emergencies/survival-kit-supplies.html

FEMA

https://www.ready.gov/

Survival System Suppliers:

UNCHARTED

https://unchartedsupplyco.com/pages/survival-systems

SOL

https://www.surviveoutdoorslonger.com/

REI

https://www.rei.com/

Cabelas

https://www.cabelas.com/shop/en#

World Wide Survival Systems

https://ditchpack.com/

Contact Information:

Dave McClard dlmcc@lanl.gov